2008 IDFG Kootenai River Recovery Project Update

Four components to Kootenai River recovery investigations

Nutrient enhancement

- Started June 15
- Late start due to high turbidity, not high flows and temps
- Difficulty getting phosphorus (prices increasing)
- Continue through October 1
- Beginning fish evaluations next week – electrofishing

Trout studies

Looking at fish assemblages above and below barriers

Continue telemetry study to evaluate winter survival and movements during high winter flows

Radio Tag 30 1 to 2 year old RBT <200mm

Results from winter/spring 2007-2008

Most fish didn’t move much from tagging locations under different flows

Preferred (used) pools and eddy's along main channel

2008 Burbot studies

Fall – Spring Hoop netting for stock assessment, tagging – 3 burbot collected winter 2008

Light traps to evaluate any potential hatch in the wild – none collected in 2008

Intensive Rearing (hatchery) difficult so we tried

<u>Extensive rearing in 2008 -</u> stock larvae in pond and see if they survive and grow

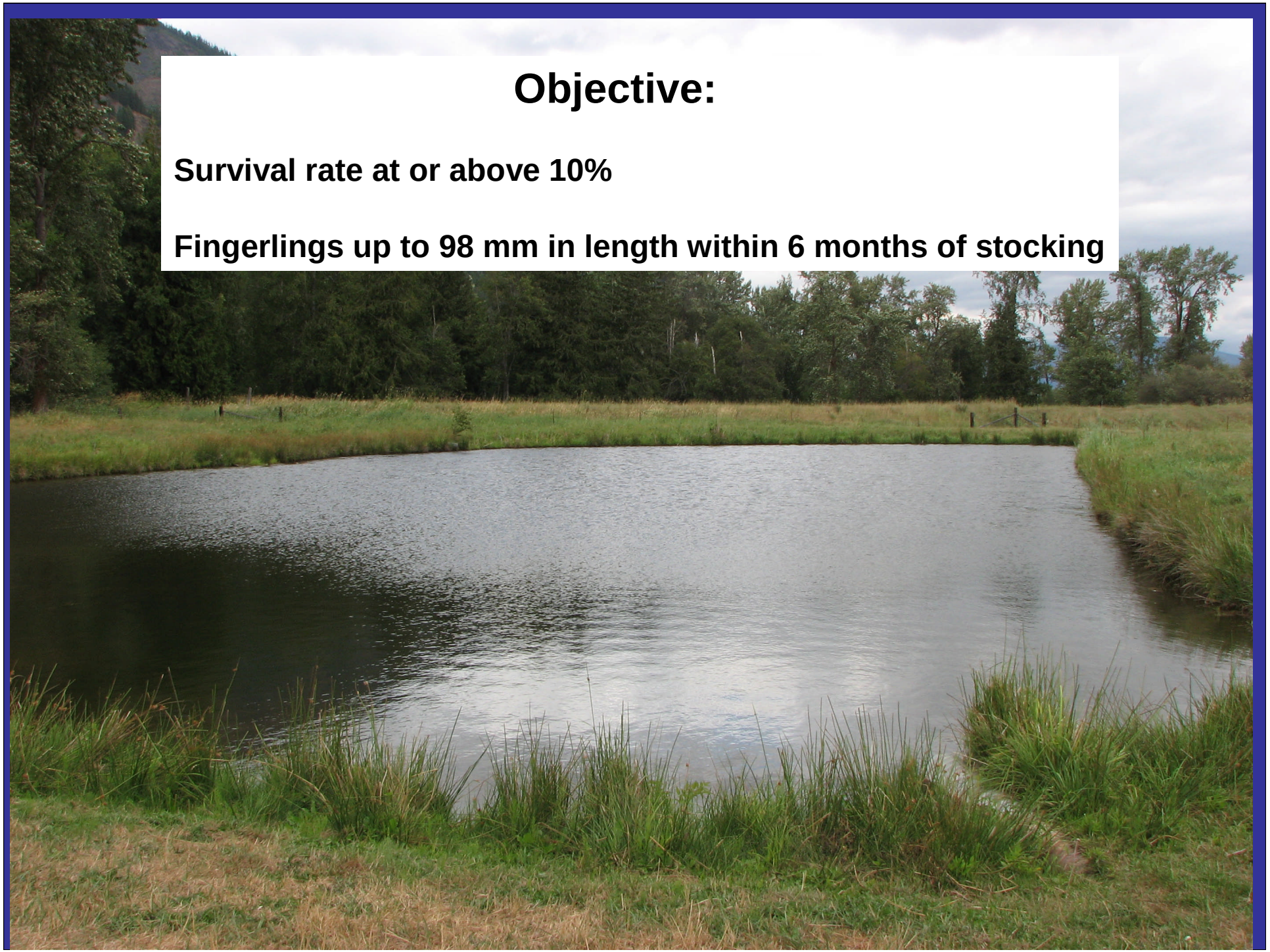
Preliminary studies –found to work well in Belgium recovery of burbot

Collected spawners from Moyie Lake, BC (similar genetic Strain) and brought to U of Idaho for hatching

After hatch at U of I, eyed larvae are transported to private pond.

Size of release
37 to 57 day old larvae 6mm tl average

Stocking of burbot larvae
by high powered scientist



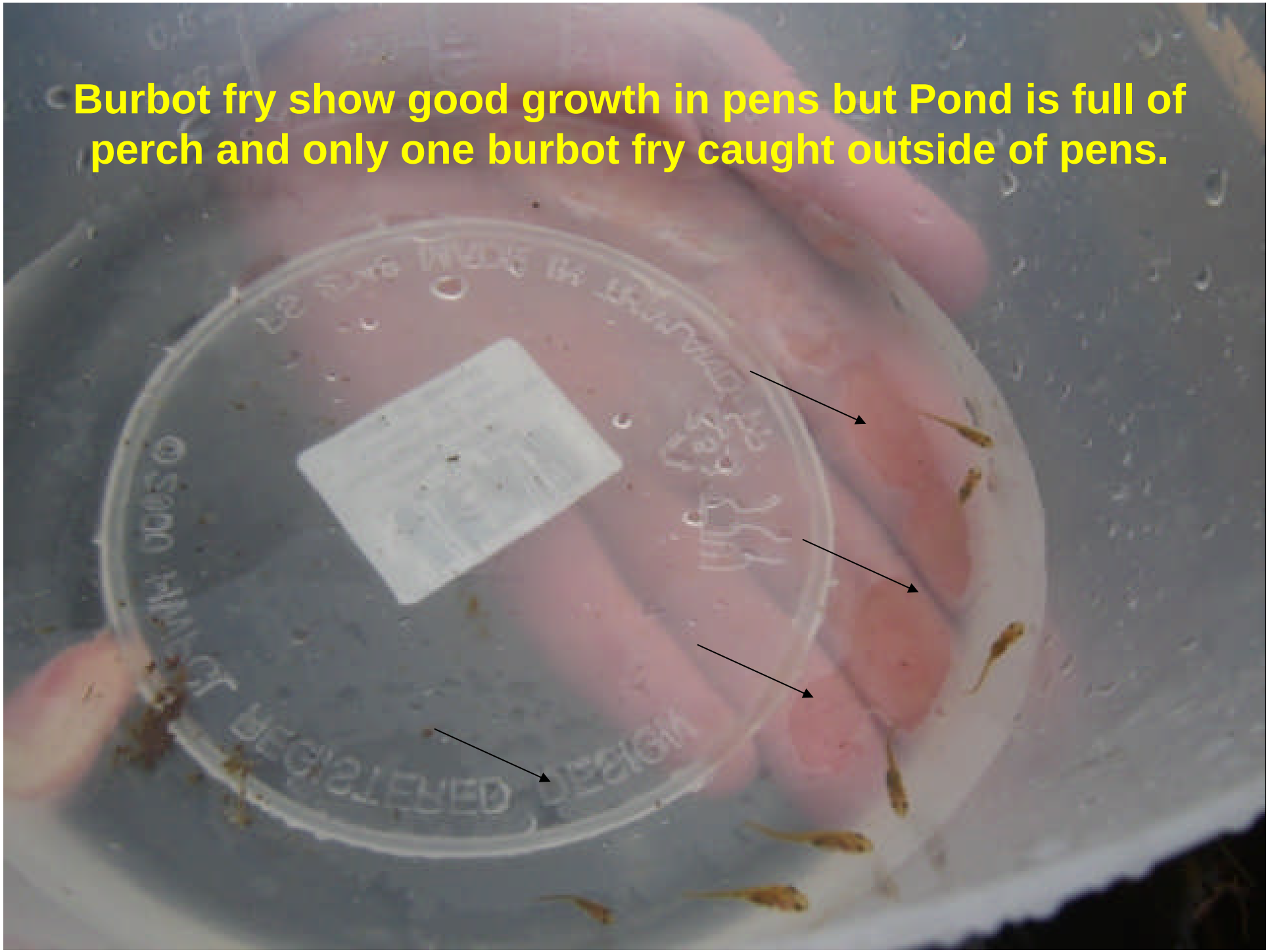
Objective:

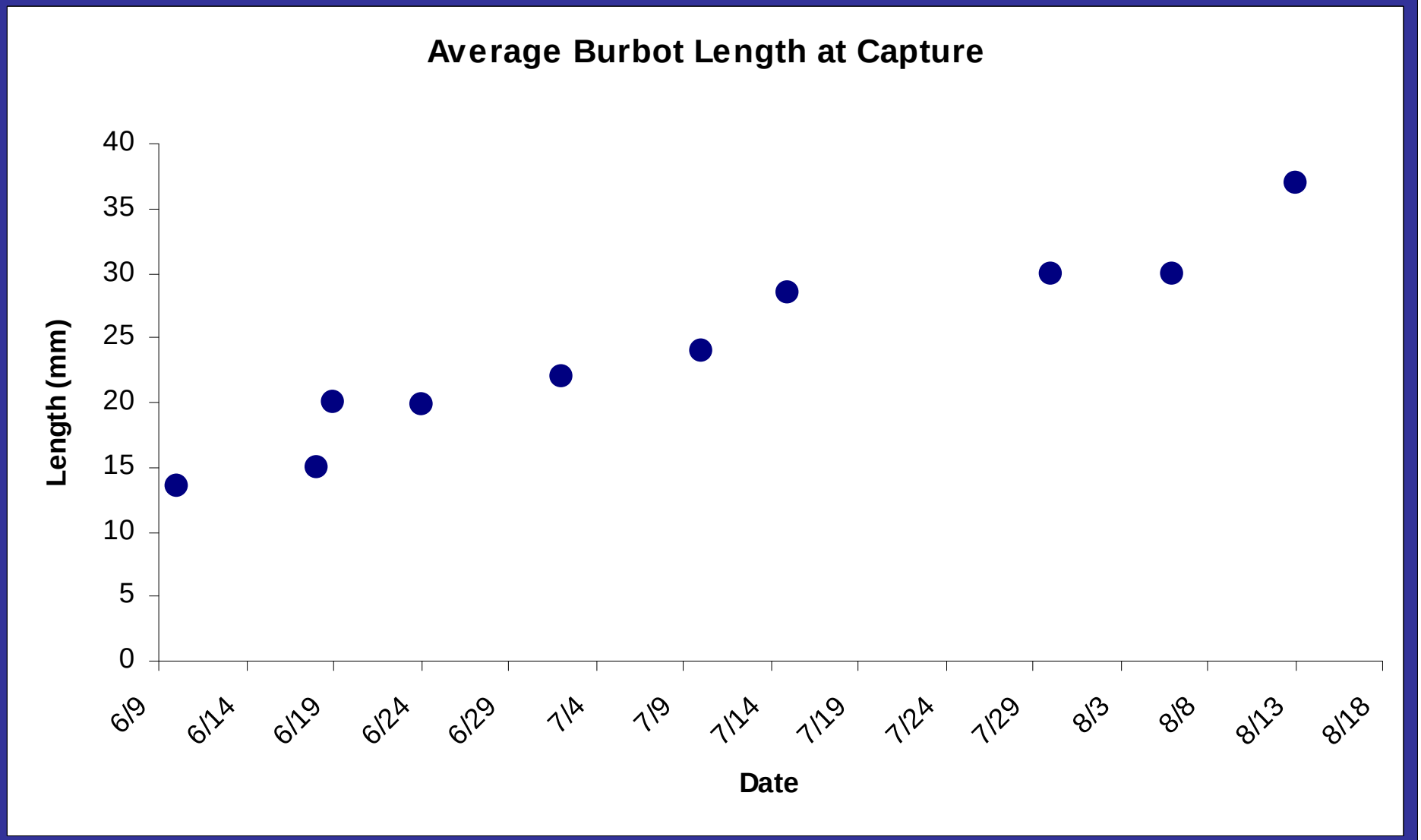
Survival rate at or above 10%

Fingerlings up to 98 mm in length within 6 months of stocking

Burbot larvae also stocked in
pens to reduce mortality

Burbot fry show good growth in pens but Pond is full of perch and only one burbot fry caught outside of pens.





Study to be repeated in 2009 but without perch
45 mm juvenile burbot from pens August 13

Sturgeon Studies M & E schedule

Adult capture/Telemetry – March – June, September

- Mark-recapture data and abundance estimates
- Mortality estimates
- Adult movements

Egg Mats – May – July

- Spatial and temporal distribution of Spawning events

Free embryo release (ELH studies) – June – July

- Incubation and early life history requirements

Larval sampling – July – August

- Evaluate natural recruitment and other

Juvenile sampling (gillnets) – late July – September

- Recruitment evaluation, mortality, age/growth

Adult Capture

Setlines and angling

125 adults captured in 2008 , 32 females, 40 males, 53 unknown

19 new fish (85% recaps) – similar to past years

Set-lined 30 days from March 10 – May 5, 2008

12 tags implanted in Adult sturgeon in 2008

81 adult white sturgeon with active Vemco transmitters

Eggs mats – determine spatial and temporal distribution of spawning

May through July – 229 eggs (most at Shorty's Island)

Free embryo release

1) imprint young sturgeon on areas with gravel substrates

2) increase production

3) determine early life history substrate requirements

2008 Free Embryo Release

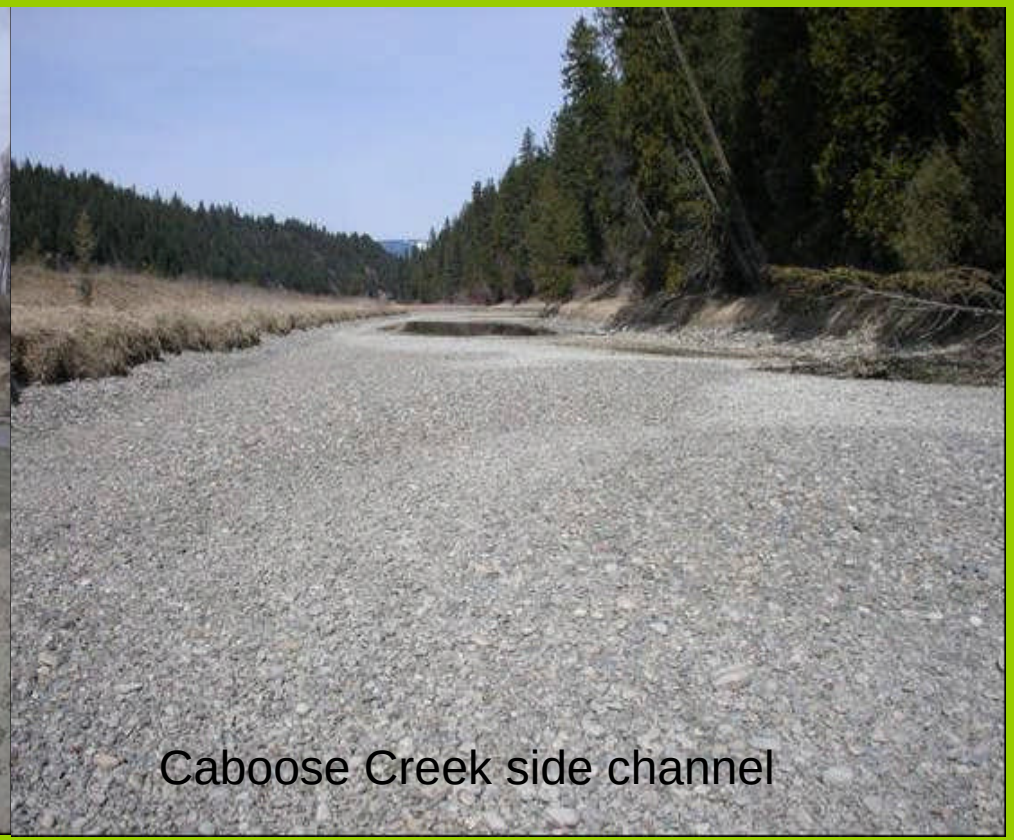
700,000 FE released at 5 sites

Date	No. of FE	RKM	No. of Families	
16-Jun	69,132	255.9	1	Crossport
20-Jun	*23,063*	*231*	*1*	*Shorty's Island*
24-Jun	25,000	262.5	1	Hemlock
24-Jun	93,000	257.4	1	Moyie
26-Jun	62,051	255.9	1	Crossport
26-Jun	*20,000*	*270.5*	*1*	*Caboose Cr.*
28-Jun	121,500	257.4	1	Moyie
30-Jun	100,000	306	3	Sturgeon hole
1-Jul	125,265	270.5	2	Caboose Cr.
2-Jul	108,935	262.5	2	Hemlock
	747,946			
	704,883	W/O side channel study		

Montana Sturgeon hole (RKM 306)

Side channel experiment (FE release) – evaluate incubation and hiding habitat

20,000 FE's released over gravel (Caboose Creek side channel)
20,000 FE's over sand/silt (Shorty's Island side channel)

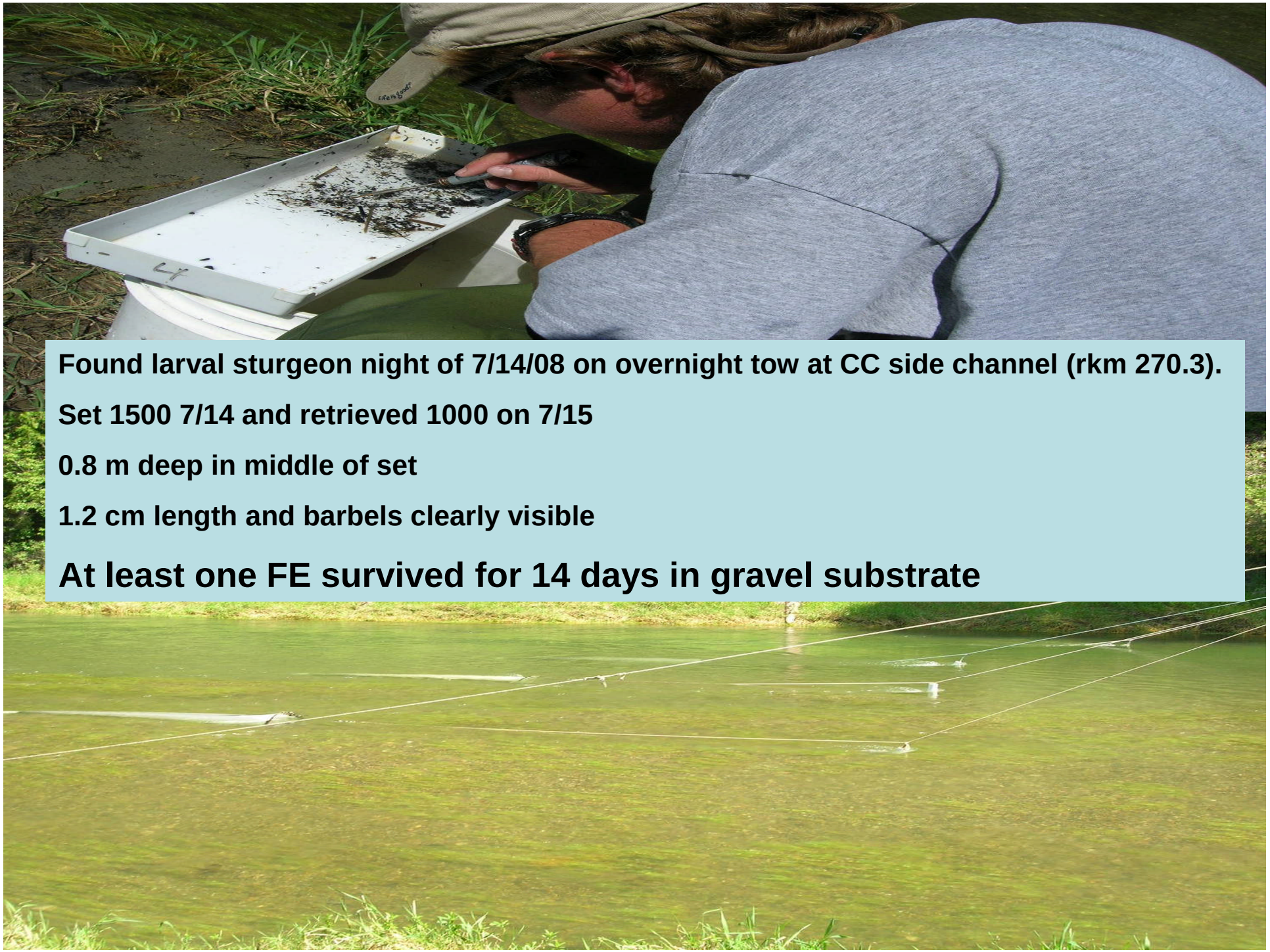


Gravel good – Sand bad

Standard Larval sampling

1) Evaluate sturgeon and by catch recruitment from natural conditions
2) Evaluate survival of released FE's and other studies
3) Began 7/09 continues to present

Collected 1,000's of sucker and other larvae



Found larval sturgeon night of 7/14/08 on overnight tow at CC side channel (rkm 270.3).

Set 1500 7/14 and retrieved 1000 on 7/15

0.8 m deep in middle of set

1.2 cm length and barbels clearly visible

At least one FE survived for 14 days in gravel substrate

Fall sturgeon activities

Phase out larval sampling

Continue juvenile sampling into September

Begin Adult capture in Kootenai Delta and Kootenai River in Idaho – tagging adults, abundance estimates